



The Ultimate Unit 1 Cheat Sheet

Everything you need to know about the PPC, comparative advantage, and supply and demand

Scarcity

Resource: an input used to create goods and services

Scarcity: the fundamental problem of economics where there are not enough resources to fulfill all wants and needs.

- EX: Governments have limited revenue to fund their projects

Macroeconomics: a branch of economics that studies the behavior of the economy as a whole

Factors of Production: The resources used to produce all goods and services.

- Land: all natural resources
- Labor: the human effort that goes into production
- Capital: man-made resources used to create goods and services. Includes **Physical Capital** (tools, machines, factories) and **Human Capital** (the skills, education, health)
- Entrepreneurship: the act of bringing together the other factors of production to create a good or service



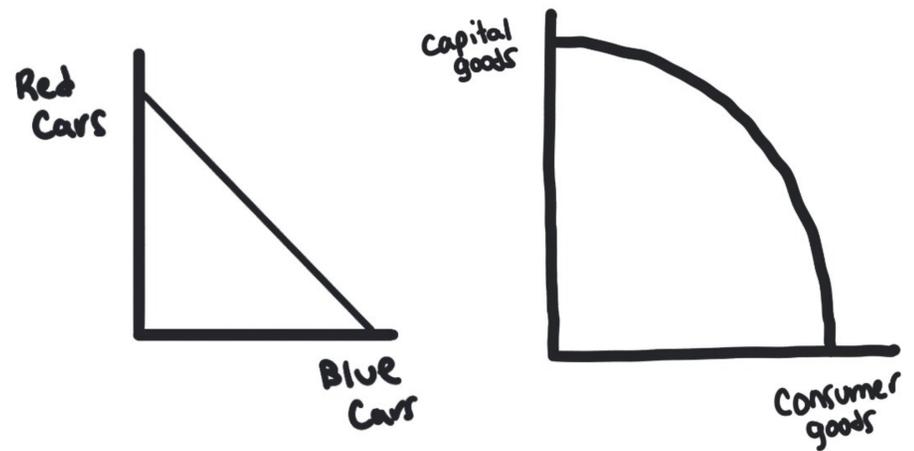
Opportunity Cost & PPC

Trade-Off: giving up one thing to get another due to scarcity.

Opportunity Cost: the value of the next best alternative given up when making a choice.

- Any decision has many trade-offs, but only ONE opportunity cost

Production Possibilities Curve (PPC or PPF): a graph showing different combinations of two goods that can be produced using all resources efficiently.

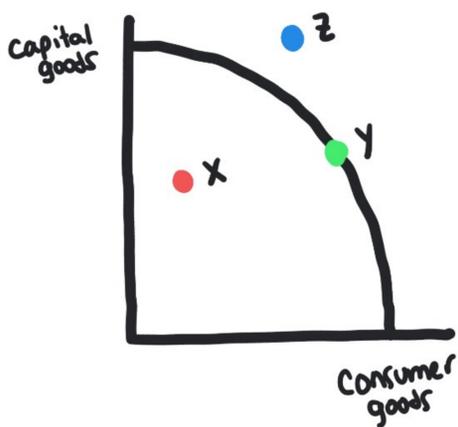


Constant Opportunity Cost occurs when the two goods are similar, with substitutable resources

- represented by a linear PPC

Increasing Opportunity Cost occurs when two goods require resources that are not easily interchangeable

- represented by a bowed out PPC

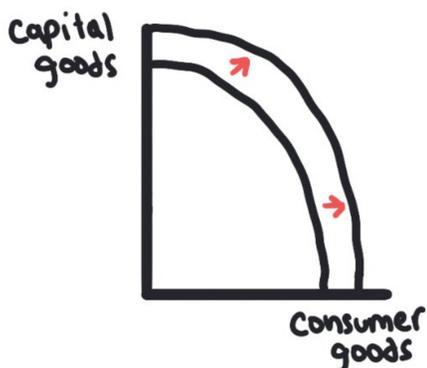


Underutilization: a situation where an economy is not using all of its resources efficiently, producing less than its maximum potential output.

Productive Efficiency: a situation where an economy is using all of its resources efficiently to produce at its potential output

Unattainable Point: a combination of goods that cannot be produced with the current resources and technology available to an economy.

PPC and Economic Growth



Increased Production Possibilities

- Caused by an increase in the factors of production, and improvement in the quality of the factors of production, or better technology
- Example: an increase in immigration → more labor → greater production possibilities
- Show by an outward shift of the PPC
- Points that were previously unattainable are now attainable

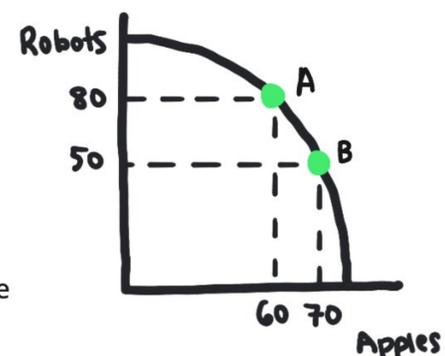
Decreased Production Possibilities

- Caused by a decrease in the factors of production
- Show by an inward shift of the PPC
- The economy can no longer produce combinations of goods that were previously attainable
- Example: War destroys infrastructure → less capital → less production possibilities

Calculating Opportunity Cost

Remember that opportunity cost is the value of what is given up

On the PPC graph, there are two goods. Typically when you gain more of one good you give up some of the other.



To find O.C. on the PPC graph, use the "Other Over" method. This determines how much of one good you give up to produce exactly one unit of the other

Point A to Point B

Give up 30 robots to get 10 apples. Opportunity Cost 3 robots for every 1 apple.

Comparative Advantage

Absolute Advantage: the ability to produce more of a good than another producer, given the same resources.

Comparative Advantage: the ability to produce a good at a lower opportunity cost than another producer.

Terms of Trade: the rate at which one good can be exchanged for another in trade; must lie between both parties' opportunity costs to be mutually beneficial.

Trading based on comparative advantage allows countries to consume outside their PPC

In this case, the USA has the absolute advantage in both goods, but only has the comparative advantage in the production of cars.

Rule: a country can only have the comparative advantage in one good, not both!

Output Questions
amount of output that can be produced with the same resources.

$$\text{O.C.} = \frac{\text{Other}}{\text{Itself}}$$

Input Questions
amount of resources (inputs) needed to produce each good.

$$\text{O.C.} = \frac{\text{Itself}}{\text{Other}}$$

	CARS	PHONES
USA	400	600
CANADA	200	400

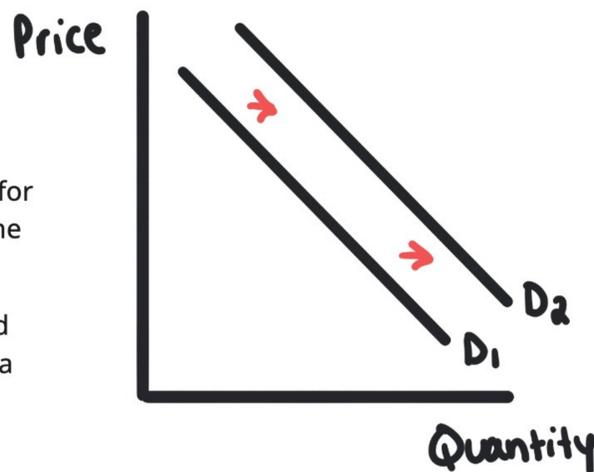
Demand

Quantity Demand: the number of people willing and able to buy a good or service at a given price.

Law of Demand: inverse relationship between price and quantity demanded.

Substitute Goods: two goods that can be used for the same purpose. An increase in the price of one leads to an increase in demand for the other.

Complementary Goods: goods often consumed together. An increase in the price of one causes a decrease in demand for the other.



Shifters of the Demand Curve:

1. Change in Tastes / Preferences
2. Change in income
3. Change in the price of related goods
4. Change in population
5. Change in expectations about future prices

If people expect the price of gasoline to increase in the near future, they will buy more gasoline today

Supply

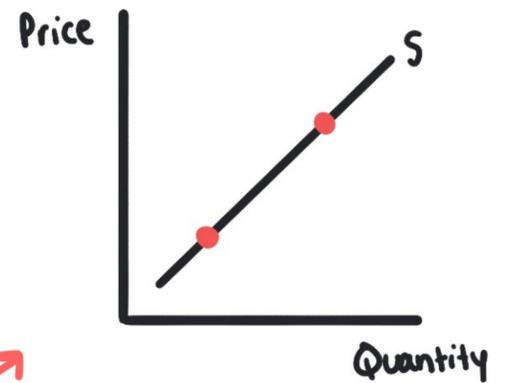
Quantity Supplied: the number of firms willing and able to sell a good or service at a given price

Law of Supply: direct relationship between price and quantity supplied

Subsidy: money given by the government to encourage the production of a good or service

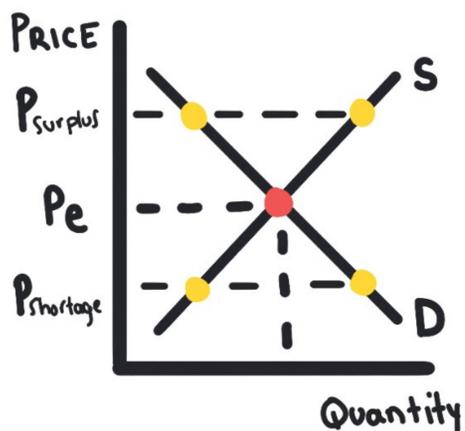
Shifters of the Supply Curve:

1. Change in Resource Prices
2. Change in Technology or Productivity
3. Change in government policy (taxes & subsidies)
4. Change in number of sellers
5. Change in expectations about future prices



Careful, this graph shows a change in quantity supplied, caused by a change in price. It does not show a shift in supply!

Equilibrium & Disequilibrium



Equilibrium: the state where the quantity demanded equals the quantity supplied at a specific price.

Disequilibrium: any time the market price is not at equilibrium, causing a surplus or shortage.

Shortage

- Occurs when $P < P_e$
- $Q_d > Q_s$

Surplus

- Occurs when $P > P_e$
- $Q_s > Q_d$

When supply, demand, or both shift on the graph, we end up at a new equilibrium, often with a different price or quantity

Scenario 1: An increase in the price of fertilizer shifts the supply of apples to the left

Price \uparrow Quantity \downarrow

Scenario 2: A new TikTok trend makes retro digital cameras more popular

Price \uparrow Quantity \uparrow

Scenario 3: New machinery makes green tea farmers more productive & new studies show additional health benefits to drinking green tea

Price \leftrightarrow Quantity \uparrow

